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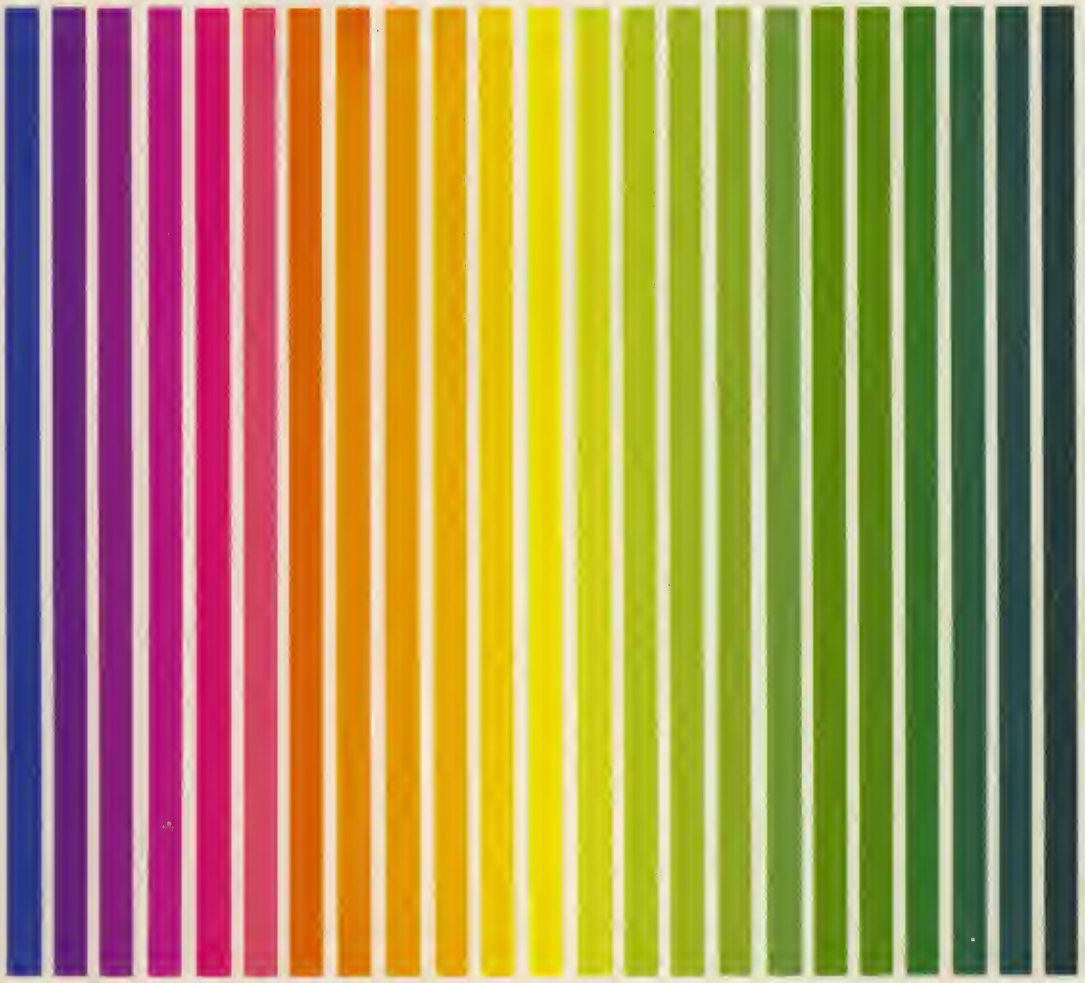

William H. Northrup

CHECKER KING

Computerized checkers for 1-2 players (ages 7 and up)

Cassette: 16K (APX-10129) Diskette: 16K (APX-20129)

User-Written Software for ATARI Home Computers

William H. Northrup

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Computerized checkers for 1-2 players (ages 7 and up)

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by

William H. Northrup

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INTRODUCTION

OVERVIEW

Are your checkers opponents too predictable? Do you need a real challenger, the kind who thinks ahead, and can't be double jumped? How about playing against a friend, or setting up your own board to practice a new strategy? It's time to turn on CHECKER KING, the computerized checkers game.

You may play against the computer or against another player. CHECKER KING lets you compete against the computer at six different levels of difficulty. You also have the options of setting up the board manually and deciding who will take the first move. Be prepared to be intimidated at first. Improve your skills by playing against the computer until you become a checkers champion.

REQUIRED ACCESSORIES

One ATARI Joystick Controller per player

Cassette version

16K RAM
ATARI 410 Program Recorder

Diskette version

16K RAM
ATARI 810 Disk Drive

CONTACTING THE AUTHOR

Users wishing to contact the author about CHECKER KING may write him at

13940 Tahiti #215
Marina del Rey, CA 90291

GETTING STARTED

LOADING CHECKER KING INTO COMPUTER MEMORY

1. Remove any program cartridge from the cartridge slot of your computer.

2. In a one-player game against the computer, plug your Joystick Controller into the first (leftmost) controller jack at the front of your computer console. In a two-player game, plug the Joystick Controllers into the two leftmost jacks.

3. If you have the cassette version of CHECKER KING:

   a. Have your computer turned OFF.

   b. Insert the CHECKER KING cassette into the program recorder's cassette holder and press REWIND on the recorder until the tape rewinds completely. Then press PLAY to prepare the program recorder for loading the program.

   c. Turn on the computer while holding down the START key.

   d. When you hear a beep, release the START key and press the RETURN key. The program will load into computer memory and start automatically.

If you have the diskette version of CHECKER KING:

   a. Have your computer turned OFF.

   b. Turn on your disk drive.

   c. When the BUSY light goes out, open the disk drive door and insert the CHECKER KING diskette with the label in the lower right-hand corner nearest to you. (Use disk drive one if you have more than one drive.)

   d. Turn on your computer and your TV set. The program will load into computer memory and start automatically.

THE FIRST DISPLAY SCREEN

After the program loads into computer memory, a red and black checkerboard displays with a yellow border. The words, LEVEL and BEGINNER appear at the top.

SELECTING YOUR OPTIONS

Use the option keys on the right of your computer console to choose the type of game. CHECKER KING offers three kinds of competition: 1) against the computer, 2) against another player, or 3) against the computer or another player with a specially set up board.

PLAY AGAINST THE COMPUTER

Press the SELECT key. The message

```
GAME          COMPUTER
```

displays, meaning you'll be playing against the computer.

Next, press the SELECT key twice to skip past the prompt MANUAL BOARD SET (this option isn't relevant to a one-player game) and to display the prompt

```
RED MOVE FIRST
```

You play with the red checkers and have the first move. If you want the computer to move first, press the OPTION key. "FIRST" will change to "SECOND" on the screen.

Finally, you select the level of play. Press the SELECT key to see the prompt:

```
LEVEL  BEGINNER
```

If you choose this level of competition, the computer will be able to "look" ahead one and one-half full moves. Now, press the OPTION key and the prompt changes to:

```
LEVEL NOVICE
```

Keep pressing the OPTION key and you will see, in succession, the following levels

```
BEGINNER - computer looks ahead one and one-half moves
NOVICE - computer looks ahead two moves
EXPERT - computer looks ahead two and one-half moves
MASTER - computer looks ahead three  moves
GND MSTR - computer looks ahead three and one-half moves
CHAMPION - computer looks ahead four moves
```

Press the OPTION key until your preferreed level of difficulty displays

> Note: The computer processing time for GND MSTR or CHAMPION is approximately ten minutes between each move.

You're now ready to play. Make sure you're holding the Joystick Controller with the red button at the upper left and the word TOP facing the television screen. Press the START key. When it's your turn, a flashing "X" appears on the screen. Use your Joystick to position the "X" over the checker to be moved and press the red Joystick button. Then move the "X" to the destination square and press the Joystick button again to set down the checker. Use your Joystick to move the "X" forward, backward, sideways, and

diagonally. The computer will accept only the "legal" moves (forward and diagonal - unless it's a king).

PLAY AGAINST ANOTHER PLAYER

Press the SELECT key. The message

GAME COMPUTER

displays. To select a two-player game, press the OPTION key. The message

GAME MANUAL

indicates a two-player game.

Now, press the SELECT key twice to skip past the message MANUAL BOARD SET (which isn't relevant to a two-player game) and to display the prompt

RED MOVE FIRST

Decide who will use the red checkers (the player controlling the Joystick in the leftmost controller jack) and who will use the white checkers (the player controlling the Joystick in the second controller jack). Red automatically moves first. To change this setting so that red moves second, press the OPTION key. FIRST will change to SECOND. Now press START to begin the game.

When it's your turn, a flashing "X" appears on the screen. Make sure that you're holding the Joystick Controller with the red button at the upper left and the word TOP facing the television screen. Use your Joystick to position the "X" over the checker to be moved and press the red Joystick button. Then move the "X" to the destination square and press the red button again to set down the checker. Use the Joystick to move a checker forward, backward, sideways, and diagonally. The computer will only accept legal moves (forward and diagonal - unless it's a king).

MANUAL BOARD SET

You use the MANUAL BOARD SET option to prearrange the checker board to study a strategy or to resume an interrupted game. You can use this option whether you're playing against the computer or against another player.

Manual Board Set- Play Against the Computer

Press the SELECT key. The message

GAME COMPUTER

displays, meaning you'll be playing against the computer. Press the SELECT key again and you'll see the message:

MANUAL BOARD SET

Press the OPTION key and you will see a red king checker in the upper left-hand square of

the board and a flashing "X" over one of the other checkers. Press the OPTION key repeatedly to see the four choices -- red and white checkers and red and white kings. To place a checker on the board, first select the type of checker you want with the OPTION key. Next, position the flashing "X" over the desired square by moving the Joystick to the right, left, back, or front. Then press the red Joystick button to set down your checker. Repeat these steps until you have the desired playing board.

Press the SELECT key and the message:

RED MOVE FIRST

displays. You play with the red checkers and you have the first move. If you want the computer to move first, press the OPTION key. "FIRST" will change to "SECOND" on the screen.

Finally, you select the level of play. Press the SELECT key to see the prompt

LEVEL BEGINNER

If you choose this level of competition, the computer will be able to "look" ahead one and one-half full moves. Keep pressing the OPTION key and you will see, in succession, the following levels.

BEGINNER - computer looks ahead one and one-half moves
NOVICE - computer looks ahead two moves
EXPERT - computer looks ahead two and one-half moves
MASTER - computer looks ahead three moves
GND MSTR - computer looks ahead three and one-half moves
CHAMPION - computer looks ahead four moves

Press the OPTION key until your preferred level of difficulty displa

Note: The computer processing time GND MSTR or CHAMPION is approximately ten minutes between each move.

You're now ready to play. Make sure you're holding the Joystick Controller with the red button at the upper left an the word TOP facing the television screen. Press the START key. When it's your turn, a flashing "X" appears on the screen. Use your Joystick to position the "X" over the checker to be moved and press the red Joystick button. Then move the "X" to the destination square and press the Joystick button again to set down the checker. Use your Joystick to move the "X" forward, backward, sideways, and diagonally. The computer will accept only the "legal" moves (forward and diagonal - unless it's a king).

Manual Board Set - Play Against Another Player

Press the SELECT key. The message

GAME COMPUTER

displays. To select a two-player game, press the OPTION key. The message

indicates a two-player game.

Now, press the SELECT key and you'll see the message:

MANUAL BOARD SET

Press the OPTION key and you will see a red king checker in the upper left-hand square of the board and a flashing "X" over one of the other checkers. Press the OPTION key repeatedly to see the four choices -- red and white checkers and red and white kings. To place a checker on the board, first select the type of checker you want with the OPTION key. Next, position the flashing "X" over the desired square by moving the Joystick to the right, left, back, or front. Then press the red Joystick button to set down your checker. Repeat these steps until you have the desired playing board.

Now press the SELECT key to display the prompt

RED MOVE FIRST

Decide who will use the red checkers (the player controlling the Joystick in the leftmost controller jack) and who will use the white checkers (the player controlling the Joystick in the second controller jack). Red automatically moves first. To change this setting so that red moves second, press the OPTION key. FIRST will change to SECOND. Now press START to begin the game.

When it's your turn, a flashing "X" appears on the screen. Make sure you're holding the Joystick Controller with the red button at the upper left and the word TOP facing the television screen.Use your Joystick to position the "X" over the checker to be moved and press the red Joystick button. Then move the "X" to the destination square and press the Joystick button again to set down the checker. Use your Joystick to move the "X" forward, backward, sideways, an diagonally. The computer will accept only the "legal" moves (forward and diagonal - unless it's a king).

PLAYING CHECKER KING

GAME RULES

The checker board consists of 64 squares, 32 red and 32 black. Each player has twelve checkers. The object of the game is to be the first to remove all the opposing checkers from the board. You remove checkers by jumping over them. You can move a checker only diagonally forward from one black square to another. When you successfully move a checker to the opposite end of the board, it becomes a king. A king checker can move in any direction.

You can take checkers away from your opponent by jumping his pieces, landing on an empty square between each jump. You can perform single or multiple jumps.

PROBLEMS

If you're having troubles with the game, the message display at the top of the screen will alert you. Depending on the move attempted, one of two messages will appear. You will see either:

YOU CAN'T DO THAT
(The attempted move is invalid.
Reenter your move.)

or

YOU HAVE TO JUMP
(You've overlooked a possible jump.
The "X" will automatically move to the starting
position of the jump.)

The following are some common problems to watch for:

1. Be sure to wait for the prompt, YOUR TURN, before attempting a move.

2. If you see the prompt, YOU CAN'T DO THAT, make sure you're moving your own checker, using the Joystick correctly, and not overlooking a jump. Remember, too, that you must first pick up a checker by positioning the flashing "X" on it and pressing the red button before you can move the checker to another square.

SUGGESTED STRATEGY AND HELPFUL HINTS

Try to look ahead as the computer does. The further you're able to look ahead, the better your game.

RESTARTING OR REPLAYING THE GAME

You can interrupt the game at any time and start over by pressing the START key. When you finish a game and want to play again using the same options, press the START key. To change the options, for a new game, press the RESET key and then enter the options for the game of your choice.

ADVANCED TECHNICAL INFORMATION

The computer will select the optimal move for the chosen level of play. The method used to compute the move is the "mini/ max" method described in this section.

Each position on a checkerboard has an assigned value. This value varies according to the checker's position (e.g., your piece, a king, or the computer's piece has a different value.) A checker's value increases as the checker approaches the king row.

A move is carried out to the selected level of play and the board value is calculated. The board value equals the sum of all computer pieces minus the sum of all your piece values.

The best move for your piece is the lowest value of the board at your level. The best move for the computer is the highest value board at the computer move level.

At each level, the board value is saved (maximum for the computer and minimum for you). For each lower level, all moves are tried at the next higher level. The board value is kept (highest for the computer, and lowest for you). If the next lower level is the computer and the value is higher than the previously saved value, it is replaced with the new value. The same is true for your level, with the exception that you're looking for a new lower value to replace.

This extensive moving continues until the first level is reached. At this point, the best move for that piece has been determined. If the value is greater than the previous move, then the move is saved and the level one value is replaced. All possible moves are checked and the result is the best move for the skill level that you're playing.

There are numerous shortcuts in the program to increase the speed of the move generator, but it basically works as described. It tries all moves at the selected level and executes the best move.

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1. Name and APX number of program.

2. If you have problems using the program, please describe them here.

3. What do you especially like about this program?

4. What do you think the program's weaknesses are?

5. How can the catalog description be more accurate or comprehensive?

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program:

   _____ Easy to use
   _____ User-oriented (e.g., menus, prompts, clear language)
   _____ Enjoyable
   _____ Self-instructive
   _____ Useful (non-game programs)
   _____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

8. What did you especially like about the user instructions?

9. What revisions or additions would improve these instructions?

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

11. Other comments about the program or user instructions:

From

STAMP

ATARI Program Exchange
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